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10/593,581

01/31/2007

Adi Shechtman

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EXAMINER

SZMAL, BRIAN SCOTT

ART UNIT

PAPER NUMBER

3736

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/593,581 | <b>Applicant(s)</b><br>SHECHTMAN ET AL. |  |
|                              | <b>Examiner</b><br>Brian Szmaj       | <b>Art Unit</b><br>3736                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008 and 10 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-10,12,13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-10,12,13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Objections***

1. Claim 15 is objected to because of the following informalities: In line 3, “inclination” was added to the claim, but was not underlined. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 5, 7-9, 12, 13, 15, 16, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shechtman et al (2005/0148839 A1).

Shechtman et al disclose a means for measuring a spinal deformity and further disclose inertial sensors in communication with a central processing unit; the inclination measuring device is configured to dynamically map the angle of inclination of a person's trunk; the inertial sensors comprise a two-axis inclinometer; a sensor probe in communication with the processing unit, the sensor probe adapted to measure the distance traveled by the inclination measuring device, and the sensor probe is fixed in relation to the inertial sensors; a tracking device in communication with the inclination measuring device; the tracking device further comprises a magnetic field generator; the

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inclination tracking device further comprises at least one of a group of devices including a data storage device and a display screen in communication with the processing unit; the inclination tracking device further comprises a transmitting device for transmitting data to an external source; the processing unit is programmed to record data and compute trunk inclinational measurements of at least one of group of vertebrae, including the upper thoracic, mid-thoracic, and lumbar regions of the spine; the processing unit is programmed to compute and display the data showing at least one of a group including Coronal, Sagittal and Apical views of the spine; the central processing unit is configured to compute at least one of a group comprising the vertebral level of the trunk inclination measurements, the direction of inclination of each vertebrae, the difference in height between left and right of each vertebrae and the length of the spine; the inclination measuring device is configured to compute the angular deviation of the trunk being measured; and the inclination tracking device further comprises markers configured to be used in conjunction with the Optical 3D tracking systems to identify and calculate inclination angles of the vertebrae. See Figures 3 and 4; and Paragraphs 0042-0045.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 17, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shechtman et al (2005/0148839 A1) as applied to claim 1 above, and further in view of Leitner et al (6,500,131 B2).

Shechtman et al, as discussed above, disclose a means for measuring a deformity of a person's spine but fail to disclose the sensor probe comprises optical navigators in communication with the central processing unit, the central processing unit being adapted for image processing and communication; the inclination tracking device comprises a substantially rectangular housing having an indentation formed in the center of one edge of the housing; and the inclination tracking device comprises a pair of tracking devices attached on either side of the indentation, along the bottom edge of the rectangular housing, the moving devices adapted to stay on track and glide over the person's back.

Leitner et al, as discussed above, disclose a means for measuring the contour of a person's spine and further disclose the sensor probe comprises optical navigators in communication with the central processing unit, the central processing unit being adapted for image processing and communication; the inclination tracking device comprises a substantially rectangular housing having an indentation formed in the center of one edge of the housing; and the inclination tracking device comprises a pair of tracking devices attached on either side of the indentation, along the bottom edge of the rectangular housing, the moving devices adapted to stay on track and glide over the person's back. See Figures 1, 2, 6 and 7; Column 3, lines 16-40 and 56-67; Column 4, lines 1-19; Column 5, lines 40-64; and Column 6, lines 38-44.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Shechtman et al to include the use of optical sensors and the tracking device comprises a rectangular housing, as per the teachings of Leitner et al, since it would provide a means of measuring the contour of the body without contacting the body while the housing is in a shape that can be grasped by a user's hand.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shechtman et al (2005/0148839 A1) as applied to claim 1 above, and further in view of Peckham et al (5,167,229).

Shechtman et al, as discussed above, disclose a means for measuring the contour of a person's spine, but fail to disclose the inclination tracking device further comprises an inductor in communication with the processing unit for supplying power via a wireless connection to a unit for recharging the inclination measuring device.

Peckham et al disclose a neuromuscular stimulation system and further disclose the inclination tracking device further comprises an inductor in communication with the processing unit for supplying power via a wireless connection to a unit for recharging the inclination measuring device. See Column 7, lines 39-46.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the means of Shechtman et al to include a wireless means for recharging the device, as per the teachings of Peckham et al, since it would provide a means of recharging the device while the device is in use.

***Response to Arguments***

7. Applicant's arguments filed August 12, 2008 have been fully considered but they are not persuasive. The Applicants argue Shechtman et al does not disclose the use of inertial sensors, and therefore fail to disclose all of the claimed elements of Claim 1. The Examiner respectfully disagrees. Shechtman et al disclose in Paragraph 0046 the use of an inclinometer to measure axial trunk rotation angles. Therefore, Shechtman et al discloses the claimed inertial sensor and all of the claimed elements of Claim 1.

8. The Applicants also argue neither Leitner et al nor Peckham et al, in combination with Shechtman et al teach the claimed elements of Claim 1. The Examiner respectfully disagrees. As stated above, Shechtman et al does disclose the use of an inertial sensor, wherein the inertial sensor is a two-axis inclinometer. Therefore, the combination of Shechtman et al with either Leitner et al or Peckham et al teaches all of the claimed elements of dependent Claims 4, 10, 17 and 18.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Szmál whose telephone number is (571)272-4733. The examiner can normally be reached on Monday-Friday, with second Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian Szmál/  
Examiner, Art Unit 3736



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/Max Hindenburg/

Supervisory Patent Examiner, Art Unit 3736